

## NEW SPECIES OF AMERICAN BARK BEETLES (COLEOPTERA: SCOLYTIDAE)

Stephen L. Wood<sup>1</sup>

ABSTRACT.— The following species of Scolytidae (Coleoptera) are described as new to science: *Amphicranus splendens*, *Araptus micropilosus* (Mexico), *Araptus morigerus* (Panama), *Araptus placetulus* (Mexico), *Chramesus bispinus* (Colombia), *Cnesinus aquihuai* (Mexico), *Cnesinus atrocis* (Panama), *Cnesinus meris* (Colombia), *Dendrocranulus gracilis*, *Hylastes retifer*, *Hylocurus prolatus*, *Micracis burgosi*, *Phloeotribus perniciosus*, *Pseudothysanoes fimbriatus*, *Pseudothysanoes pini*, *Scolytodes pilifer*, *Scolytus binodus* (Mexico).

While my taxonomic monograph of the Scolytidae of North and Central American (Wood 1982) was in press, several species new to science came to my attention. The following pages report 17 of these species in the genera *Amphicranus* (1), *Araptus* (3), *Chramesus* (1), *Cnesinus* (3), *Dendrocranulus* (1), *Hylastes* (1), *Hylocurus* (1), *Micracis* (1), *Phloeotribus* (1), *Pseudothysanoes* (2), *Scolytodes* (1), and *Scolytus* (1) from Mexico (13), Panama (2), and Colombia (2). Most of the Mexican material was received through Dr. T. H. Atkinson from the Colegio de Postgraduados, Institucion de Enseñanza y Investigaciones Agrícolas, Chapingo, Mexico.

### *Amphicranus splendens*, n. sp.

This species belongs to the *melanura* species group of the genus and is the most specialized known species in that group. It is distinguished from *argutus* Wood by the larger size, by the reticulate, dull frons, by the modified anterior margin of the pronotum, by the very different elytral declivity, and by other characters.

MALE.— Length 3.1 mm (paratypes: male 3.5 mm, female 3.0–3.2 mm), 3.2 times as long as wide; color very dark brown.

Frons broadly, uniformly convex; surface dull, very finely reticulate-granulate, punctures and vestiture virtually obsolete; a few setae at margins of eyes, epistomal margin ornamented by moderately abundant, long hair. Antennal club 1.7 times as long as wide, 1.7 times as long as scape; sutures 1 and 2

clearly indicated, slightly procurved; club densely covered by minute hair.

Pronotum 1.4 times as long as wide; sides straight and parallel on basal half, gradually tapering to angle on anterior margin; anterior margin straight on median half, formed by an elevated, continuous costa, meeting lateral margin at an abrupt, obtuse angle; summit indefinite, anterior to middle; low, almost scalelike asperities restricted to slightly less than anterior half; surface reticulate except for shining asperities and transverse rugae on more than posterior third; punctures minute, moderately close. Glabrous.

Elytra 1.8 times as long as wide, 1.3 times as long as pronotum; sides straight and parallel to base of declivital processes, posterior margin almost straight, feebly incised; disc shining, almost smooth, with rather numerous very feebly impressed lines, punctures minute, confused, rather close. Declivity subvertical; ventrolateral margin on more than lower third of a complete circle acutely, moderately explanate, entire at suture; upper margin not elevated at suture, interstriae 2 armed by a small, pointed tubercle borne on an obtuse elevation, summit of this elevation continuing to major process; major process occupying area of about interstriae 4 to 5, its lower margin at middle of declivity, its lateral surface continuing contour and sculpture of disc, its apex bluntly rounded, its free projection equal in length to width of antennal club, its mesal surface armed by a coarse, subapical denticle; face of declivity strongly, broadly concave, punctures fine, confused,

<sup>1</sup>Life Science Museum and Department of Zoology, Brigham Young University, Provo, Utah 84602.

obscure. Vestiture fine, short, obscure on declivital face, a few longer setae on lateral areas.

**FEMALE.**— Similar to male except upper third of elytral declivity occupied by large, rounded protuberance in place of major process, small denticle at base on interstriae 2 present; antennal club without long setae on posterior face.

**TYPE MATERIAL.**— The male holotype, female allotype, and three paratypes were taken at San Rafael, Mexico, Mexico, 4-IX-1981, 2400 m, S-240, *Quercus*, T. H. Atkinson and A. Aquihua. The holotype, allotype, and paratypes are in my collection.

*Araptus micropilosus*, n. sp.

This species keys to *tenuis* (Blackman) in Wood (1982:933). It is distinguished by the very different female frons and by the strongly reticulate pronotum.

**FEMALE.**— Length 1.4 mm (paratypes 1.2–1.5 mm), 2.5 times as long as wide; color dark reddish brown.

Front flattened on a subcircular area occupying more than median three-fourths of area between eyes from epistoma to vertex, central half of flattened area micropunctate and ornamented by dense, minute micropile, surrounding area more coarsely punctured and bearing a rather sparse brush of long hair. Antennal club subcircular, without definite sutures (suture 1 apparently marked on some specimens).

Pronotum 1.05 times as long as wide; widest on basal fourth, tapered anteriorly, then rather narrowly rounded on finely serrate anterior margin. Summit indefinite, behind middle; posterior areas strongly reticulate, broad median line impunctate; remainder of disc with sparse minute punctures, these largely replaced by fine granules. Largely glabrous.

Elytra 1.6 times as long as wide; sides almost straight and parallel on basal two-thirds, rather broadly rounded behind; striae not impressed except 1 slightly, punctures small, shallow, in rows; interstriae about twice as wide as striae, smooth and shining except for rather abundant irregular lines, punctures absent. Declivity rather steep, convex; suture weakly elevated, striae 1 narrowly, rather

deeply impressed, 2 as high as 1, and 1, 2, and 3 each with a row of very minute granules. Vestiture largely abraded on type, consisting of rows of erect, stout, blunt, interstitial bristles on declivity, each bristle about as long as distance between rows, spaced within a row by length of a bristle.

**MALE.**— Similar to female except frons convex coarsely, closely punctured, a feeble median carina on middle half, vestiture fine, sparse, inconspicuous.

**TYPE MATERIAL.**— The female holotype, male allotype, and seven paratypes were taken at Rancho Tepetates, Km 35 on the Veracruz–Xalapa highway, Veracruz, Mexico, 12-VI-1979, T. H. Atkinson. The holotype, allotype, and paratypes are in my collection.

*Araptus blanditus* Wood

*Araptus blanditus* Wood, 1974:47 (Holotype, female; Fortin de las Flores, Veracruz, Mexico; Wood Coll.)

In my collection three species have been confused under this name. The unique female type has the frons moderately concave, the pronotal disc is rather long, smooth, brightly shining, and without impressed points but with rather large, almost round, rather widely spaced punctures, the discal striae punctures are almost all in rows, declivital interstriae 2 is not wider than 1 and ascends rather conspicuously laterally, with the punctures of striae 2 comparatively coarse, and the antennal club is comparatively small and slender (1.5 times as long as wide). As pointed out below, slight but consistent differences separate this species from the two that follow.

*Araptus morigerus*, n. sp.

This species was incorrectly reported (Wood 1982:951) as *blanditus* Wood. It is distinguished from *blanditus* by the characters described below.

**FEMALE.**— Length 1.9 mm (paratypes 1.7–2.0 mm), 2.6 times as long as wide; color dark reddish brown.

Frons as in *blanditus*, except very slightly more strongly impressed, a small median tubercle on epistoma (obscure in a few specimens). Antennal club as in *blanditus*.

Pronotum as in *blanditus* except with moderately abundant impressed points, punctures smaller, closer, mostly elongate.

Elytra as in *blanditus* except stria punctures on anterior half of disc moderately confused, surface with moderately abundant impressed points; declivity shorter, steeper, punctures on striae 2 smaller, interstriae 2 wider, more nearly flattened; setae much finer.

MALE.— Similar to female except frons broadly convex, a feeble transverse impression just below middle, without any other impressions, punctures fine, rather abundant, vestiture fine, short, uniformly distributed; epistoma straight.

TYPE MATERIAL.— The female holotype, male allotype, and 33 paratypes were taken near Cerro Punta (labeled Volcán Chiriquí), Panama, 11-I-1964, 5500 ft, No. 376, broken branch, by me. The holotype, allotype, and paratypes are in my collection.

*Araptus placetulus*, n. sp.

This species is distinguished from *blanditus* Wood by the characters described below.

FEMALE.— Length 1.7 mm (males 1.9 mm), 2.4 times as long as wide; color very dark brown.

Frons similar to *blanditus* except less strongly impressed, surface more nearly granular, vestiture shorter (about two-thirds as long). Antennal club larger, stouter (1.3 times as long as wide).

Pronotum as in *blanditus* except anterior slope more gradual, disc slightly shorter, with numerous impressed points, punctures slightly smaller, much closer, elongate.

Elytra as in *placetulus* on disc; declivity about as in *blanditus* except interstriae 2 more strongly impressed, almost flat, as wide as 1; vestiture fine as in *morigerus*.

MALE.— Similar to female except frons convex, a slight median callus at upper level of eyes, a transverse impression just below middle; epistoma slightly recurved, median third weakly elevated, slightly impressed in lateral areas before bases of mandibles, punctures very fine in central area on lower half, longer laterally and above.

TYPE MATERIAL.— The female holotype, male allotype, and one male paratype were

taken at Uruapan, Michoacán, Mexico, 1-XI-1980, 1600 m, S-149, Aguacate, T. H. Atkinson and A. Equihua. The holotype, allotype, and paratype are in my collection.

*Chramesus bispinus*, n. sp.

This species is unique in the genus. It is distinguished by the bicolored pattern of scales and by the pair of large, hornlike spines on the elytral declivity.

MALE.— Length 1.8 mm (paratypes 1.9–2.2 mm), 1.9 times as long as wide; color a somewhat variable pattern of pale and dark scales.

Frons with a low, transverse elevation at level of antennal insertion, shallowly concave below this elevation, moderately concave above to upper level of eyes; surface subreticulate and finely punctured; vestiture of short stout setae, erect and slightly longer on lateral margins of upper area, epistoma with a brush of longer, yellow setae. Antennal scape with a tuft of long, yellow hair; club comparatively small for this genus, an apparent obscure surface indication of suture 1 present on anterior face.

Pronotum 0.77 times as long as wide; widest at base, sides moderately arcuate to rather broadly rounded anterior margin, a slight constriction just before anterior margin; surface smooth, shining, punctures small, close. Vestiture of short, abundant scales, those on basal third and lateral margins pale, dark in central and anterior areas; a few pale scales scattered in dark areas.

Elytra 1.3 times as long as wide, 1.8 times as long as pronotum; sides almost straight and parallel on basal two-thirds, rather broadly rounded behind; striae not impressed, punctures small, distinctly impressed; interstriae smooth, shining, about four times as wide as striae, lateral half of 1 to mesal half of 2 shallowly sulcate from base, broadening and deepening to become impression of declivity. Declivity commencing slightly behind middle, moderately steep; interstriae 1 distinctly elevated, strongly, rather broadly impressed from 1 to 3 on upper half, shallowly, more broadly impressed below; interstriae 3 armed slightly above middle by a pair of very coarse, hornlike spines directed caudomesad and slightly dorsad, each equal in length to



width of antennal club. Vestiture of interstitial cover of short ground scales, each slightly longer than wide, and rows of erect bristles, those near base only slightly longer than ground scales, becoming longer and more slender posteriorly except on central part of lower declivity, these setae continue to apex of spines.

FEMALE.— Similar to male except frons less strongly impressed; tuft of hair on scape conspicuously smaller.

TYPE MATERIAL.— The male holotype, female allotype, and five paratypes were taken at Tenerife, Valle, Colombia, 1-81 (three paratypes IX-80), tallos de curuba (passion flower vine stems, *Passiflora mollissima*), Patricia Chacon.

*Cnesinus aquihuai*, n. sp.

This species is distinguished from *atavus* Wood by the slightly larger, stouter body, and by the very different frons that is described below.

FEMALE.— Length 2.5 mm, 2.2 times as long as wide; color dark reddish brown.

Frons broadly, subconcavely impressed between lateral margins from epistoma to upper level of eyes; upper margin of impressed area at upper level of eyes abrupt, subcarinate; floor of impressed area reticulate, ornamented on a triangular area by special, compressed, reddish brown setae, base of triangle on epistoma, occupying median two-thirds, its apex on median line two-thirds distance toward upper level of eyes.

Pronotum and elytra essentially as in *atavus*.

MALE.— Similar to female except frontal impression somewhat irregular, ending gradually well below upper level of eyes; special ornamental setae absent, those present in lateral areas above epistomal area longer, yellowish.

TYPE MATERIAL.— The female holotype, male allotype, and two female paratypes were taken between Cuetzalan and Pasa del Jardin, Puebla, Mexico, 5-V-1981, 550 m, S-224, by T. H. Atkinson and A. Aquihua. The holotype, allotype, and paratypes are in my collection.

*Cnesinus atrocis*, n. sp.

This species is distinguished from the allied *bicolor* Eggers by the very different female epistomal callus and its setal ornamentation, by the more deeply impressed striae, by the larger strial punctures, and by the near absence of interstitial punctures except for those bearing the uniseriate rows of erect bristles.

FEMALE.— Length 2.3 mm, 2.7 times as long as wide; color reddish brown.

Frons as in *bicolor* except for epistomal callus; epistomal callus small, its upper margin forming a rather high, subacute, almost straight, transverse carina on more than median two-thirds, upper slope of callus (dorsad of crest of carina) ornamented by a single row of reddish, compressed specialized setae extending without interruption full length of carina.

Pronotum as in *bicolor* except punctures somewhat larger and more strigose, with limited confluence of strigosities on middle third.

Elytra about as in *bicolor* except striae more deeply, abruptly, narrowly impressed; bristle-bearing interstitial punctures almost uniseriate and distinctly crenulate, supplemental punctures obsolete, interstitial bristles coarser, rarely abraded.

TYPE MATERIAL.— The female holotype was taken near Cerro Punta (labeled Volcán Chiriqui), Panama, 11-I-1964, 5500 ft No. 388, from the twig of an unidentified sapling, by me. The holotype is in my collection.

*Cnesinus meris*, n. sp.

This species is distinguished from *bisulcatus* Schedl by differences in the epistomal callus and its setal ornamentation and in the sculpture of the pronotum.

FEMALE.— Length 2.4 mm, 2.6 times as long as wide; color dark reddish brown.

Frons as in *bisulcatus* except epistomal callus more abruptly elevated, its surface smooth, dull on large triangular area, upper margins of flattened area bearing one row of short, compressed, reddish brown ornamental bristles (in *bisulcatus* callus smaller, its margins less abrupt, upper two-thirds covered by ornamental setae).

Pronotum as in *bisulcatus* except punctures averaging smaller, not as close (very similar).

MALE.— Similar to female except frontal callus greatly reduced, its ornamental setae finer, yellowish, more nearly normal.

TYPE MATERIAL.— The female holotype, male allotype, and 12 paratypes were taken at La Cumbre, Valle, Colombia, 3-VI-1959, en café, by N. Muñoz. The holotype, allotype, and paratypes are in my collection.

*Dendrocranulus gracilis*, n. sp.

This species is distinguished from the allied *macilentus* (Blandford) by the much smaller size, by the larger pronotal and elytral punctures, by the very different female frons, and by other characters described below.

FEMALE.— Length 1.4 mm (paratypes 1.3–1.6 mm), 3.2 times as long as wide; color black.

Frons broadly convex except flat on triangular area occupying median half at epistoma to obtuse apex well above upper level of eyes, this shining area minutely, rather densely punctured and ornamented by very fine, abundant, short hair, remaining area more coarsely punctured; vestiture less abundant.

Pronotum 1.2 times as long as wide; subquadrate, all margins moderately, about equally arcuate; surface obscurely subreticulate; indefinite summit near middle; discal area coarsely punctured, punctures largely replaced by slender elongate calluses in lateral areas; vestiture of sparse hair.

Elytra 2.0 times as long as wide, 1.7 times as long as pronotum; sides straight and parallel on basal three-fourths, very broadly rounded behind; striae not impressed, punctures rather coarse, in rows; interstriae as wide as striae, smooth, punctures uniseriate, half as large as those of striae. Declivity very steep, broadly convex, almost flat; surface sculpture as on disc; suture distinctly elevated, flat from striae 1 to 4, lower margin subacute to interstriae 4. Vestiture very fine, of rather short strial and conspicuous longer interstitial hair of moderate abundance.

MALE.— Similar to female except frons more strongly convex above, a weak transverse impression at level of antennal

insertion, coarsely punctured and sparsely pubescent over entire surface; declivital interstriae 2 rather broadly, moderately impressed, smooth, shining, impunctate.

TYPE MATERIAL.— The female holotype, male allotype, and four paratypes were taken at Km 58 on the Xochimilco-Oaxtepec highway, Morelia, Mexico, 22-I-1980, 1970 m, S-19, Cucurbitaceae, T. H. Atkinson; six paratypes are from Uruapan, Michoacán, Mexico, 16-V-1981, *Sechium edulis*, A. Equihua. The holotype, allotype, and paratypes are in my collection.

*Hylastes retifer*, n. sp.

This species keys to *macer* LeConte in my monograph (Wood 1982:95), although its true affinities appear much closer to *mexicanus* Wood. It differs from all American species except *macer* by the uniformly reticulate pronotum and elytra. From *macer* it is distinguished by the stouter body, by the larger, stouter pronotum, with punctures much smaller and more abundant, and by the smaller, less strongly impressed strial punctures on the disc.

MALE.— Length 5.4 mm, 2.8 times as long as wide; color black.

Frons essentially as in *macer* except more finely, closely punctured.

Pronotum 1.1 times as long as wide; sides parallel on basal half; surface uniformly, very finely reticulate (visible at minimum of 40X), punctures small, moderately deep, abundant, spaced by distances about equal to diameter of a puncture.

Elytra 1.9 times as long as wide; striae rather weakly impressed except near declivity, punctures rather small, moderately impressed; entire surface uniformly, finely reticulate; interstriae distinctly wider than striae, punctures fine, confused, rather abundant, 2 on posterior half of disc wider than 1 or 3 and weakly elevated; declivity as in *mexicanus* except reticulate.

TYPE MATERIAL.— The male holotype was taken at Km 54 Carretera Toluca-Morelia, Est. de Mexico, 30-X-1980, 2520 m, *Pinus montezumae*, T. H. Atkinson and A. Equihua. The holotype is in my collection.

*Hylocurus prolatus*, n. sp.

This species is distinguished from *longipennis* Wood by the much weaker male frontal carina, by the less protuberant, more pubescent female frons, and by the sculpture at the basal margin of the declivity.

MALE.—Length 2.8 mm (paratypes 2.5–2.9 mm), 3.3 times as long as wide; color black.

Frons convex, a slight transverse protuberance on middle third, a weak transverse carina indicated about two-thirds distance from epistomal margin to upper level of eyes.

Pronotum and elytra as in *longipennis* except for basal area of elytral declivity; interstriae on posterior fourth of disc moderately convex, their summits interrupted at punctures (not clearly nodulate as in *longipennis*), their crests very briefly, longitudinally carinate at subabrupt margin of declivity (much more so than in *longipennis*; *declivital interstriae* 9 more strongly elevated than in *longipennis*, its crest much less strongly tuberculate.

FEMALE.—Similar to male except frons resembling female *longipennis*, with protuberance almost obsolete, median half of lower third impunctate, almost smooth, transverse area at upper level of eyes more finely punctured and ornamented by more abundant, fine, short, somewhat reddish setae; interstriae at base of declivity without longitudinal short carinae, margin less abrupt.

TYPE MATERIAL.—The male holotype, female allotype, and 18 paratypes were taken at Zacapoaxia, Puebla, Mexico, 6-V-1981, 2150 m, S-230, *Carya*, T. H. Atkinson and A. Equihua. The holotype, allotype, and paratypes are in my collection.

*Micracis burgosi*, n. sp.

The antennal scape of the female is the most remarkable found in any scolytid. Although the antennal club clearly places this species in *Micracis*, the protibia is more slender than seen elsewhere in this genus and the posterior face bears a few minute tubercles as in *Hylocurus*. Rather than suggest synonymy of these genera on the basis of this intermediate species, it is arbitrarily assigned to *Micracis* because of the antennal structure. It

shares with *dimorphus* (Schedl) an identical protibia and antennal club, and a secondary shaft on the female scape, but it differs in numerous characters, some of which are described below.

FEMALE.—Length 2.6 mm (paratypes: male 2.2–2.4 mm, female 2.3–2.8 mm), 3.3 times as long as wide; color dark brown.

Frons feebly, transversely impressed at level of antennal insertion, flattened below, upper area to well above eyes weakly convex, central half smooth, brightly shining, impunctate; lateral and upper margins finely punctured and ornamented by moderately long, rather abundant setae. Antennal scape to insertion of funicle club shaped, its length equal to about one and one-half times width of eye, its dorsal margin ornamented by a fringe of rather abundant, long setae, most of these more than twice as long as this portion of scape, scape extended on dorsoapical angle above insertion of funicle into a long, slender shaft equal in length to combined length of funicle and club (or almost twice length of basal portion of scape), basal two-thirds of this shaft as wide as funicle, apical third twice this width, shaft glabrous except dorsal margin of its apical third ornamented by a tuft of very long setae, some of these setae longer than entire antenna; funicle and club as in *dimorphus*, except club very slightly more slender.

Pronotum 1.3 times as long as wide; outline as in *dimorphus*; posterior areas subreticulate, shining, crenulations continuing to base, except decreasing in size on posterior third and usually with rudimentary puncture on their posterior margins in this area.

Elytra 1.9 times as long as wide; sides straight and parallel on basal three-fourths, obtusely pointed behind; striae not impressed except 1 feebly, punctures moderately coarse, rather deep; interstriae one and one-half times as wide as striae, smooth, shining, punctures almost as large as those of striae, shallow, rather widely spaced. Declivity steep, convex; sculpture about as on disc except odd-numbered interstriae each with a row of about four fine tubercles, 9 moderately, subacutely elevated near its apex, crest of this elevation joining costal margin and continuing at descending height to sutural apex. Vestiture consisting of minute strial



hair and rows of erect, coarse interstitial setae, those on disc about as long as distance between rows, almost twice as long on declivity.

Protibia about as in *dimorphus* except tubercles on posterior face smaller.

MALE.— Similar to female except frons more strongly convex, coarsely punctured on upper two-thirds, vestiture simple, rather short, uniformly distributed; scape simple, without ornamentation.

TYPE MATERIAL.— The female holotype, male allotype, and 25 paratypes were taken at Cuernavaca, Morelos, Mexico, 2-II-1981, *Delonix regia* bole, A. Burgos.

*Phloeotribus perniciosus* n. sp.

This species is distinguished from *destructor* Wood by the very different elytral declivity that superficially resembles some male *Hyllocurus*.

MALE.— Length 2.3 mm (paratypes 1.3–1.4 mm), 2.2 times as long as wide; color very dark brown.

Frons and pronotum about as in *destructor*, except pronotum less scabrous.

Elytra proportions and outline as in *destructor*; disc similar to *destructor* except interstitial crenulations lower, not as sharp, wider, mostly uniseriate, those on interstriae 1 to 9 near base of declivity largely subnodulate but ending at margin of declivity except 9 continuing as a strongly elevated, coarsely serrate, submarginal costa to apex; declivity about as steep but less strongly arched, with interstriae 1 to 8 unarmed, smooth, brightly shining, each with a uniseriate row of minute punctures; vestiture finer and longer than in *destructor*.

FEMALE.— Similar to male except irregularly convex.

TYPE MATERIAL.— The male holotype, female allotype, and three paratypes were taken along the Pátzcuaro-Ario de Rosales highway, Michoacán, Mexico, 31-X-1980, 2240 m, S-137, *Prunus serotina*, T. H. Atkinson and A. Aquihua.

*Pseudothysanoes fimbriatus*, n. sp.

This species is distinguished from *peniculus* Wood by the larger size, by the flat

female frons, with shorter hair on the vertex, and by the different antenna.

FEMALE.— Length 1.7 mm (paratypes 1.6–1.9 mm), 2.8 times as long as wide; color dark brown.

Frons flat below, very slightly convex above; smooth, shining, and impunctate on median area below, grading into reticulation upward and laterally then finally punctate-subgranulate; vestiture consisting of a fringe of long hair on upper margin, tips of longest extending slightly beyond middle of frons. Antenna similar to *peniculus* except segments of scape wider, club slightly narrower; scape, funicle, and club ornamented by rather abundant, long setae.

Pronotum and elytra as in *peniculus* except stria punctures on disc more distinct, interstitial punctures more nearly replaced by granules.

MALE.— Similar to female except frons with a large, shallow, central fovea, reticulate in lower area, specialized setae on vertex absent, sparse setae uniformly distributed; antenna normal, setae sparse, rather short; pronotum and elytra as in male *peniculus* except declivital interstriae 3 with a row of rounded granules; elytral vestiture almost all abraded, apparently similar to male *peniculus*.

TYPE MATERIAL.— The female holotype, male allotype, and 18 female paratypes were taken at Zacapoaxtla, Puebla, Mexico, 6-V-1981, 2150 m, S-231, *Phoradendron*, T. H. Atkinson and A. Aquihua.

*Pseudothysanoes pini*, n. sp.

This species is distinguished from the closely allied *coniferae* (Wood) by the less strongly expanded female scape and by differences in the elytral declivity described below.

FEMALE.— Length 1.6 mm (paratype 1.5 mm), 3.0 times as long as wide; color black, with white vestiture.

Head about as in *coniferae* except frontal setae less conspicuous; scape less strongly flattened, more nearly like male *coniferae* with larger tuft of hair.

Pronotum and elytral disc about as in *coniferae* except interstitial scales closer, shorter, and wider, each scale about as wide as long. Elytral declivity steeper and more broadly

convex than in *coniferae*; interstriae 2 feebly impressed, 1 and 3 weakly convex on upper two-thirds, weak impression near apex extending from striae 1 to 4; interstriae 5 and 7 feebly elevated, joining, their continuing convexity forming ventrolateral margin and fusing with 1 at apex; scales on interstriae 1, 3, 5, and 7 forming double rows.

TYPE MATERIAL.—The female holotype and one slightly crushed female paratype were taken at Km 43 on the Texcoco-Calpulpan Highway, Mexico, Mexico, 17-III-1981, 2780 m, S-198, *Pinus hartwegii* x *P. montezumae*, T. H. Atkinson. The holotype and paratype are in my collection.

*Scolytodes pilifer*, n. sp.

This species is distinguished from *ingavorus* Wood by the much longer setae on the female frons, by the absence of reticulation on the pronotum, and by other characters described below.

FEMALE.—Length 1.4 mm (male 1.3–1.4 mm), 2.4 times as long as wide; mature color very dark brown.

Frons apparently as in *ingavorus* except setae on upper margin much longer, attaining epistoma (greater part of surface obscured by these setae).

Pronotum as in *ingavorus* except surfaces between asperities and between punctures smooth, brightly shining, punctures apparently slightly larger, deeper.

Elytra as in *ingavorus* except punctures deeper, striae and interstitial punctures subequal in size, those on declivity similar to disc, confused only on lower half, striae setae half as long, interstitial setae stouter.

MALE.—Similar to female except frons strongly convex, smooth, shining in central area, some reticulation elsewhere, a distinct transverse impression at level of antennal insertion, punctures rather fine, not close; vestiture of fine, short, sparse hair, interstitial bristles on declivity slightly stouter.

TYPE MATERIAL.—The female holotype, male allotype, and three paratypes were taken at Uxpanapa, Veracruz, Mexico, 26-V-1981, 120 m, S-287, A. Aquihua. The holotype, allotype, and paratypes are in my collection.

*Scolytus binodus*, n. sp.

Although this species bears a superficial resemblance to *costellatus* Chapuis, it is not closely related. The unique feature is the presence of a widely separated pair of nodules on the female sternum 3. The male is unknown.

FEMALE.—Length 3.3 mm (paratypes 2.7–4.0 mm), 2.0 times as long as wide; color very dark brown to almost black.

Frons broadly convex; surface rather coarsely, convergently aciculate; a few fine punctures in grooves; vestiture of uniformly distributed fine long hair, upper margin on vertex bearing a row of coarser, longer hair, hair on lateral margins from epistoma to upper level of eyes longer, coarser, more abundant. Ventral half of suture 1 of antennal club with a septum, remainder of finely pubescent club unmarked by sutures.

Pronotum as long as wide; surface smooth, shining; median two-thirds very finely punctured, lateral areas more closely, somewhat coarsely punctured; glabrous.

Elytra 1.17 times as long as wide, 0.9 times as long as pronotum; surface smooth, shining; posterior third with striae and middle third of interstriae equally, rather deeply impressed (resembling *costellatus*), widths and depths of grooves equal on striae and interstriae, these grooves equal in width to convexities separating them from one another, striae and interstitial punctures in this area about equal; striae grooves continuing to base, interstitial grooves decrease in depth until almost obsolete at base, punctures decrease in size to half that of striae. A few short, stout interstitial setae on posterior half.

Anterior margin of sternum 2 costate, sternum 2 ascending at rate of about 80 degrees, smooth, shining, a few coarse punctures on its middle third; sternum 3 slightly longer than normal, impunctate, armed by a pair of moderately coarse, rounded tubercles, these dividing segment into approximately equal thirds; sternum 4 and 5 rather finely, closely punctured; a few hairlike setae on sternum 2.

TYPE MATERIAL.—The female holotype and 10 female paratypes were taken at Uxpanapa, Oaxaca, 24-V-1981, 120 m, S-182, *Combretom* sp., A. Equihua. The holotypes and paratypes are in my collection.



LITERATURE CITED

Wood, S. L. 1974. New species of American bark beetles (Scolytidae: Coleoptera). *BYU Sci. Bull., Biol. Ser.* 19(1):1-65.

———. 1982. The bark and ambrosia beetles of North and Central America (Coleoptera: Scolytidae), a taxonomic monograph. *Great Basin Nat. Mem.* 6:1-1359.